

Appendix 2.

Ecological Reference Worksheet

Author(s) / participant(s): Brenda Simpson, Dan Thomas

Contact for lead author : Brenda Simpson

Reference site used? Yes/No

No


Date: 10/20/2005 MLRA: WP-2 Ecological Site: Savannah WP-2 This must be verified based on soils and climate (see Ecological Site Description). Current plant community cannot be used to identify the ecological site.

Indicators: For each indicator, describe the potential for the site. Where possible, (1) use numbers, (2) include expected range of values for above and below average years for <u>each</u> community within the reference state, when appropriate & (3) site data. Continue description on separate sheet.	Indicator Weight
1. Number and extent of rills : No rills or past evidence.	1
2. Presence of water flow patterns: No water flow patterns present.	1
3. Number and height of erosional pedestals or terracettes: No terracettes. Minor pedestals (< 1/2 inch) will be present in small areas near tree clusters, caused by tree root impact having reduced the vegetative cover and health, allowing winds to cause minor erosion.	1
4. Bare ground from Ecological Site Description or other studies (rock, litter, lichen, moss, plant canopy are not bare ground) : Bare ground is 65%. Bare areas are < one foot in diameter and minimally connected.	1
5. Number of gullies and erosion associated with gullies: No gullies or associated erosion is present.	1
6. Extent of wind scoured, blowouts and/or depositional areas: No blowouts. Very minor scouring and deposition in some areas around tree clusters.	1
7. Amount of litter movement (describe size and distance expected to travel) : Litter size is fine (grasses) to coarse (tree litter). Travel distance is less than one foot.	1
8. Soil surface (top few mm) resistance to erosion (stability) values are averages - most sites will show a range of values for both plant canopy and interspaces, if different): Soil surface stability averages to a value of Class 4.	1
9. Soil surface structures and SOM content (include type and strength of structure, and A-horizon color and thickness for both plant canopy and interspaces, if different) : Soil surface structure is weak fine granular; A-Horizon is 0-1 inch thick with a brown color (7.5 YR 5/4); SOM is 0.7%.	1
10. Effect of plant community composition (relative proportion of different functional groups) & spatial distribution on infiltration & runoff: Dominant plant composition of warm and cool season grasses are evenly distributed across the site providing adequate protection in normal climatic years and without significant disturbances. Soil infiltration is rated at moderately rapid permeability.	1
11. Presence and thickness of compaction layer (usually none; describe soil profile features which may be mistaken for compaction on this site): Compaction layer is not present.	1
12. Functional/Structural Groups (list in order of descending dominance by above-ground weight using symbols: indicate much greater than (>>) , greater than (>) , and equal to (=) : Warm Season Grasses = Cool Season Grasses > Trees >> Half Shrubs > Forbs. Refer to Appendix 4 for list of species.	1
13. Amount of plant mortality and decadence (include which functional groups are expected to show mortality or decadence) : New plants, mature plants, and decadence of old plants is proportional to maintaining the dominant species. Warm and cool season grasses will show normal mortality and decadence.	1
14. Average percent litter cover (15 %) and depth (inches). Litter depth is 1.2 inches.	1
15. Expected annual production (this is TOTAL above-ground production, not just forage production): Average TOTAL production is 588# annually. Low = 300#. High = 875#.	1
16. Potential invasive (including noxious) species (native and non-native). List species which characterize degraded states and which, after a threshold is crossed, "can, and often do , continue to increase regardless of the management of the site and may eventually dominate the site": Juniper, with the absence of fire.	1
17. Perennial plant reproductive capability : All plants are capable of reproduction. The only limitations are weather related or a natural disease affecting reproduction.	1

Date :

Date : _____





Appendix 4.

Functional / Structural Groups Worksheet

State	<u>New Mexico</u>	Office	<u>Grants FO</u>	Ecological Site	<u>Savannah WP-2</u>
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Observers	Brenda Simpson, Dan Thomas	Date	10/20/05
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Functional / Structural Groups			Species List for Functional / Structural Groups
Name	Potential ¹	Actual ²	Plant Names
Warm Season Grasses	D		Blue Grama, Sand Dropseed, Ring Muhly
Cool Season Grasses	D		Western Wheatgrass, Indian Rice, NeedleandThread
Trees	S		Pinyon, Juniper
Half-shrubs	S		Broom Snakeweed, Rabbitbrush, Winterfat
Forbs	M		Perennials, Annuals
Biological Crust ³			

Indicate whether each "structural/functional group" is a Dominant (D)(roughly 40-100% composition), a**Sub-dominant (S)** (roughly 10-40%) composition) a**Minor Component (M)** (roughly 20-5% composition), or a**Trace Component (T)** (<2% composition) based on weight or cover composition in the area of interest (e.g., "Actual" column) relative to the "Potential" column derived from information found in the ecological site/description and/or at the ecological reference area.

Biological Crust 3 dominance is evaluated solely on cover not composition by weight